



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/274,797	03/23/1999	MORTEN STORR	09918/032001	8926

20985 7590 10/21/2002

FISH & RICHARDSON, PC
4350 LA JOLLA VILLAGE DRIVE
SUITE 500
SAN DIEGO, CA 92122

EXAMINER

HOANG, THAI D

ART UNIT

PAPER NUMBER

2662

DATE MAILED: 10/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

81

Office Action Summary

Application No.

09/274,797

Applicant(s)

STORR, MORTEN

Examiner

Thai D Hoang

Art Unit

2662

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment filed on 05 August 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 05 August 2002 is: a) ☒ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-8 and 10-18 are rejected under 35 U.S.C. 102(e) as being unpatentable over Lincoln, U.S. patent No. 6,301,226.

Regarding claim 1, Lincoln discloses a method and system, which is called "Asynchronous Transfer Mode System and Method". Lincoln's method comprises steps of:

receiving a control cell on the first source virtual channel (receiving forward resource management cell - RM cell - on a channel from source A to a switch; fig. 3-4, elements 73 and 102 respectively; fig. 5; col. 5, lines 57-63; col. 6, lines 51-56; column 7, lines 5-9);

generating the management event upon the receipt of the first control cell (set up virtual channel identification in a queue; fig. 3, elements 72 and 73; fig. 4 element 102; col. 5, lines 60-65.)

processing the management event to determine first resource management data (calculating cell rate by using a rate control algorithm; col. 6, line 61 – col. 7, line 4; col. 7, lines 31-42.);

receiving a second control cell on a second virtual channel, which is associated with a destination node (receiving backward cell on a channel from destination B to the switch; col. 6, lines 48-56, column 7, lines 10-12.);

Lincoln's method inherently comprises the step of modifying the second control cell (backward cell), then transmitting the modified cell over the first virtual channel, because Lincoln discloses that the station A (source) changes its rate depending upon the response of the station B (destination) and the switch in the receive direction from the station B to the station A (col. 7, lines 22-30; col. 9, lines 8-14; col. 11, lines 21-30.)

Regarding claim 2, Lincoln discloses that the system uses Asynchronous Transfer Mode (ATM) in both forward and backward resource management cells (abstract.)

Regarding claim 3, Lincoln discloses the first resource management data stored in a database (element 38, figures 2-4 and 7) and retrieving the first resource management data from the database using virtual channel associated with the second control cell (forward RM cell from the switch to the destination B; fig. 5; col. 7, lines 5-7.)

Regarding claim 4, Lincoln's method comprises a placing virtual channel identification data in a queue (set up virtual channel identification in a queue; fig. 3, elements 72 and 73; fig. 4 element 102; col. 5, lines 60-65), and removing the virtual channel identification data from the queue, and processing the data using a rate control algorithm (col. 6, line 61 – col. 7, line 4; col. 7, lines 31-42.)

Regarding claim 5, Lincoln discloses that the first and second virtual channel comprise a segment of an end-to-end virtual channel operatively coupling the source node and destination node (figures 2, 5, 6 and column 7, lines 5-30.)

Regarding claim 6, the method disclosed by Lincoln inherently comprises the step of forwarding the first control cell over the second virtual channel prior to determining the first resource management data (col. 7, line 5 – col. 10, line 27; col. 17, line 60 – col. 20, line 16) because the system could not calculate resource management data without backward information.

Regarding claim 7 and 8, Lincoln discloses that a forward resource management cell comprises an explicit rate parameter and a congestion parameter and modifying these parameters in the backward resource management cell (abstract; col. 2, lines 25-28; col. 7, line 43 – col. 8 line 5; figures 10-13.)

Regarding claim 10, Lincoln discloses that the system comprises a source port circuitry to send and receive control cells on a source virtual channel; a destination port circuitry to send and receive control cells over a destination virtual channel (figures 2 and 5-6, elements 30 and 45);

a switch circuitry couples a source port and a destination port, which comprises a circuitry to exchange data and control cells between a source and a destination (figure 5, element 132);

a management portion couples to the source port to receive a control cell and compute resource management (figures 2 and 6, elements 29 and 148 respectively);

a return cell circuitry (fig. 6, element 148) to receive control cells from a destination port, to modify control cells based on the resource management data computed (fig. 6, elements 38, 154, 156), and to provide the modified control cells to a source port over source virtual channel (fig. 6, element 152; col. 7, lines 22-30; col. 9, lines 8-14; col. 11, lines 21-30.)

Regarding claim 11, Lincoln's system comprises a processor, which is connected to a memory (figure 2), the memory stores instructions to configure the processor to compute and store resource management data (fig. 3 and 4, elements 75 and 106 respectively.)

Regarding claim 12, the instructions in Lincoln's system inherently associate resource management data to control information in control cells.

Regarding claim 13, Lincoln discloses a system, which comprises a shared processor coupled to a memory (figure 2.)

Regarding claim 14, Lincoln's system inherently shares transmission circuitry by a physical link from a source to destination to get beneficial for economic reasons.

Regarding claim 15, both data cells and control cells in Lincoln's system are ATM cells, since Lincoln discloses a method for ATM system (abstract.)

Regarding claims 16 and 17, the system disclosed by Lincoln comprises the steps of:

a. establishing a plurality of source virtual channel (fig. 4, element 102) and destination virtual channels (fig. 3, element 73), each source virtual channel being paired with a destination virtual channel to form a cell transmission path operatively coupling a source node to a destination node through a switch (abstract; figures 3 and 4; column 4 from line 48; column 5 from line 57)

b. receiving a control cell (forward RM cell) on the first source virtual channel (column 6 lines 25-29 and from line 61.)

c. generating a management upon receipt of the control cell (set up virtual channel identification in a queue; fig. 3, elements 72 and 73; fig. 4 element 102; col. 5, lines 60-65.)

d. processing the management to determine the first resource management data (calculating cell rate by using a rate control algorithm; col. 6, line 61 – col. 7, line 4; col. 7, lines 31-42.);

e. storing the resource management in database (element 154 figure 6), the resource management data associates with the first source virtual channel (channel connects the source A to the switch) and paired with the first destination virtual channel (channel connects from the switch to destination B; figures 2 and 6; column 5 from line 56; column 10 from line 60.)

Regarding claim 18, Lincoln discloses that the method comprises steps of:
receiving a third control cell on a first destination virtual channel, which is associated

with a destination node (column 7, lines 5-21); querying the database to retrieve resource management data associated with the first destination virtual circuit (figures 2-4, col. 11, lines 48-65); modifying the third control cell, then transmitting the modified cell over the first virtual channel (col. 7, lines 22-20; col. 10, line 60 – col. 11, line 30.)

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lincoln as applied to claim 9 above, and further in view of Jain, U.S Patent No. 5,805,577.

Lincoln does not disclose the explicit rate indication for congestion avoidance in ATM networks (ERICA) algorithm is used to update a resource management data. However, Jain discloses a method, which is called "ERICA: Explicit Rate Indication for Congestion Avoidance in ATM network". Jain uses the explicit rate indication for congestion avoidance in ATM networks (ERICA) algorithm to update a resource management data.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to adapt Jain's method into Lincoln's system in order to obtain the optimum traffic in the network.

Response to Arguments

3. Applicant's arguments filed on August 5, 2002 have been fully considered but they are not persuasive.

3.1 Regarding claim 1, in the remark, page 13, applicant argues that reference "neither teaches nor suggests method implemented at a network element through which data cells are transferred between source and destination nodes of the network."

Examiner respectfully disagrees. Applicants are directed to figures 1-6, abstract, and column 1 line 64 – column 2, line 14 of the reference. It implies that the method is "implemented at a network element through which data cells are transferred between source and destination nodes of the network."

Applicant also argues that the reference "fails to teach or suggest modifying a second control cell received on a second virtual channel associated with a destination node based on resource management data determined from a management event generate upon receipt of a first control cell over a first virtual channel associated with a source node." Examiner respectfully disagrees. Reference clearly teaches this feature. Applicant is directed to figures 5-6, 12-14, abstract, column 7, line 5 – column 10, line 27, and column 16, line 43 – column 22, line 67, where the reference addresses that the system modifies the second control cell (backward RM cell) received on another virtual channel associated with a destination node based on resource management data determined from a management event generate upon receipt of a first control cell over a first virtual channel associated with a source node.

Art Unit: 2662

3.2 Regarding claim 6, on page 14 of the remark, applicant argues that reference neither teaches nor suggests that the system forwards the first control cell over the second virtual channel prior to determine the first resource management data. Examiner respectfully disagrees. Reference inherently teaches this feature as mentioned in part 1 of this action.

3.3 Regarding claim 10, on page 14 of the remark, applicant argues that reference “neither teaches nor suggests a discreet data transmission apparatus coupled to a source node and a destination node.” Examiner respectfully disagrees. Applicants are directed to figures 2-6, abstract, and column 1 line 64 – column 2, line 14 of the reference. It implies that a “data transmission apparatus coupled to a source node and a destination node.”

In addition, applicant argues that the reference does not teach or suggest the apparatus comprises source port circuitry, switching circuitry, management circuitry, and return cell circuitry. Examiner respectfully disagrees. Reference teaches this feature. Applicant is directed to figures 2, 5 and 6; column 4, lines 4-39; column 6, line 48 – column 11, line 29.

3.4 Regarding claim 9, in the remark, page 15, applicant argues that the reference “neither teaches nor suggests the method of claim 1, adapting Jain’s method into any method disclosed by Lincoln does not result in the method of claim 9.” Although Lincohn does not explicitly disclose that Jain’s method could be adapt into his system. However, it would have been obvious to one having ordinary skill in the art to adapt Jain’s method into the system disclosed by Linchon because of the following reasons:

- Both Linchon's system and Jain's system pertain to ATM telecommunication systems and more particularly to data flow congestion control from a source to a destination in the network.
- Lincohn's system could be re-programmed with the method disclosed by Jain's in order to operate the system with ERICA algorithm for controlling data flow in the network.

3.5 Regarding claim 16, applicant argues that the reference "neither teaches nor suggests methods implemented in a network switching element." Examiner respectfully disagrees. Applicants are directed to figures 1-6 (especially figure 5), abstract, and column 1 line 64 – column 2, line 14 of the reference. It implies that the method is "implemented in a network switching element."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai D Hoang whose telephone number is (703) 305-3232. The examiner can normally be reached on Monday-Friday 8:30am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (703) 305-4744. The fax phone numbers for the organization where this application or proceeding is assigned is (703) 872-9314 for regular communications and After Final communications.

Application/Control Number: 09/274,797
Art Unit: 2662

Page 11

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4700.

Thai Hoang
October 18, 2002



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600